

**ABBREVIATIONS AND ACRONYMS**

1, 1-DCA	1, 1-dichloroethane
1, 1-DCE	1, 1-dichloroethylene
1, 2-DCA	1, 2-dichloroethane
1, 2-DCE	1, 2-dichloroethylene
AAQS	Ambient Air Quality Standards
ABAG	Association of Bay Area Governments
ACDEH	Alameda County Department of Environmental Health
ACE	Altamont Commuter Express
ACGIH	American Conference of Governmental Industrial Hygienists
ACHCS	Alameda County Health Care Services
ACHP	Advisory Council on Historic Preservation
ACL	Ambient concentration limit
ADS	Associate Directors
ADT	Average daily traffic
AET	Applied Energy Technologies
AIHA	American Industrial Hygiene Association
ALARA	As low as reasonably achievable
<sup>241</sup> Am	Americium-241
Am/Pu button	Americium/plutonium metal button
AMP	Advanced Materials Program
ANSI	American National Standards Institute
APDS	Autonomous Pathogen Detection System
APE	Area of Potential Effect
AQCR	Air Quality Control Region
ARES	Amateur Radio Emergency Services
ARF x RF	Airborne release fraction and respirable fraction
ARM	Assembly, resupply, and maintenance
ARO	Assurance Review Office
ARPA	Archaeological Resources Protection Act
ASCI	Advanced Simulation and Computing Initiative
ATA	Advanced Test Accelerator

ATSDR	Agency for Toxic Substances and Disease Registry
ASD	Atmospheric Sciences Division
AVLIS	Advanced Vapor Laser Isotope Separation
AWQC	Ambient water quality criteria
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BART	Bay Area Rapid Transit
BASIS	Biological Aerosol Sentry and Information System
BBRP	Biology and Biotechnology Research Program
BCP	Business commercial park
BDRP	Biological Defense Research Program
BEIR	Biological Effects of Ionization
BMP	Best management practice
BSL	BioSafety Level
CAA	<i>Clean Air Act</i>
CAAQS	California Ambient Air Quality Standards
CaCl <sub>2</sub>	Calcium Chloride
CAIC	Computer Incident Advisory Center
CAIRS	Computerized Accident/Incident Report
Cal-EPA	California Environmental Protection Agency
CaO	Calcium Oxide
CAR	Computing Applications and Research
CARB	California Air Resources Board
CBD	Chronic beryllium disease
CBNP	Chemical and Biological National Security
CCAA	California Clean Air Act
CCB	Change Control Board
CCP	Central Characterization Project
CCR	California Code of Regulations
CD	Critical Decision
CDC	Center for Disease Control
CDFG	California Department of Fish and Game

CEDD	California Employment Development Department
CEDE	Committed Effective Dose Equivalent
CEPRC	Chemical Emergency Planning and Response Commission
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act of 1970
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFES	Community facility elementary school
CFF	Contained Firing Facility
CFR	Code of Federal Regulations
CHEW	Chemical Exchange Warehouse
CHP	California Highway Patrol
Ci	Curie
Cl <sub>2</sub>	Chloride
CIAC	Computer Incident Advisory Center
CIMIS	California Irrigation Management Information System
CMGRAMS	Controlled materials group
CMS	Chemistry and Materials Science
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon monoxide
CRD	Catalytic reductive dehalogenation
CSA	Container storage area
CSO	Council on Strategic Operations
CSU	Container storage unit
CT	California toxic
CWSC	California Water Service Company
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
CWG	Community Work Group
CY	Calendar year
DARHT	Dual Axis Radiographic Hydrodynamic Test
dB	Decibel

dB(A)	A-weighted decibel
D&D	Decontamination and Decommissioning
DC	Direct current
DCG	Derived Concentration Guide
DDO	Deputy Director of Operations
DDSO	Deputy Director for Strategic Operations
DEAR	Department of Energy Acquisition Regulation
DHS	Department of Health Services
DLM	Designated level methodology
DNT	Defense and Nuclear Technologies
DOD	United States Department of Defense
DOE	United States Department of Energy
DOE/OAK	DOE Oakland Operations Office
DOF	California Department of Finance
DOR	Direct Oxygen Reduction
DOT	United States Department of Transportation
DP	Office of Defense Programs
DR	Damage ration
DRB	Drainage Retention Basin
DTSC	Department of Toxic Substances Control
DWTF	Decontamination and Waste Treatment Facility
DU	Depleted uranium
E2	Energy Efficiency
EA	Environmental assessment
ECAP	East (Alameda) County Area Plan
EDD	California Employment Development Department
EDE	Effective dose equivalent
EDO	Environmental Duty Officer
EDS	Engineering Demonstration System
EED	Energy and Environment Directorate
EIR	Environmental impact report
EIS	Environmental Impact Statement

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EML	Effluent pollutant limit
EMPC	Energetic Material Processing Center
EMRL	Environmental Monitoring Radiation Laboratory
EO	Executive Order
EOG	Environmental Operations Group
EOO	Emergency Operations Office
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act of 1986
EPD	Environmental Protection Department
EPDTG	Environmental Protection Department Training Group
EPL	Effluent pollutant limit
EPTP	Environmental Protection Training Department
ER	Environmental restoration
ERPG	Emergency Response Planning Guidelines
ERD	Environmental Restoration Division
ES&H	Environment, Safety, and Health
ES&H WG	ES&H Working Group
EST	Environmental support team
EUV	Extreme ultraviolet
EUVL	Extreme ultraviolet lithography
EWSF	Explosives Waste Storage Facility
EWTF	Explosives Waste Treatment Facility
°F	Fahrenheit
FAC	Equally Likely to Occur in Wetlands for Uplands
FACU	Usually Occurs in Uplands
FACW	Usually Occurs in Wetlands
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
FESSP	Fission Energy and Systems Safety Program
FFA	Federal Facility Agreement
FFCA	<i>Federal Facilities Compliance Act</i>
FHC	Fuel hydrocarbon

FIRP	Facility Infrastructure Recapitalization Project
FONSI	Finding of no significant impact
FPOC	Facility Point of Contact
FR	Federal Register
FR/O	Federal Reserve/Open Space
Freon 11	trichlorofluoromethane
Freon 113	trichlorotrifluoroethane
FSP	Facility safety plan
FTE	Full Time Equivalent
FY	Fiscal year
GAB	Gross alpha and gross beta
GET	Geosciences and Environmental Technology
GGs	Geophysics and Global Security
GIS	Geographic Information System
GPS	Global positioning system
GRR	Guidance Request Response
GSA	General Service Area
GSF	Gross Square Feet
GWH	Giga-watts per hour
GWP	Ground Water Project
GWMP	Ground Water Project Management Program
GWTF	Groundwater treatment facility
GWTS	Groundwater treatment system
HAC	Hazard Assessment and Control
HAP	Hazardous air pollutants
HAZMAT	Hazardous Material
HCAL	Hazards Control Department's Analytical Laboratory
HCD	Hazards Control Department
HCI	Hydrochloric Acid
HE	High explosives
HEA	Health and Ecological Assessment
HEAF	High Explosives Application Facility

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HEDC	High Explosives Development Center
HEDP	High-energy-density physics
HEPA	High-efficiency particulate air (filter)
HHI	Health Hazard Index
HOV	High occupancy vehicle
HR	Human Resources
HSD	Health Services Department
HSWA	Hazardous and Solid Waste Amendments
HQs	Hazard quotients
HVAC	Heating, Ventilation, and Air Conditioning
HW	Hazardous Waste
HWCA	<i>Hazardous Waste Control Act</i>
HWM	Hazardous Waste Management Division
IBIS	Innovative Business and Information Services
I & C	Instrumentation and Control
ICC	Integrated Computing and Communications
ICF	Inertial Confinement Fusion
ICRP	International Commission on Radiological Protection
IDLH	Immediately-Dangerous to Life or Health
INEEL	Idaho National Engineering and Environmental Laboratory
INL	Idaho National Laboratory
IQR	Interquartile Range
IS/EA	Initial Study/Environmental Assessment
ISCT	Industrial Source Complex Short Team
ISM	Integrated Safety Management
ISMS	Integrated Safety Management System
ISRF	International Security Research Facility
ITP	Integrated Technology Project
IWS	Integration work sheet
IWS/SP	Integrated Work Sheets/Safety Plan
JCATS	Joint Conflict and Tactical Simulation
LANL	Los Alamos National Laboratory

LBNL	Lawrence Berkeley National Laboratory
LCF	Latent Cancer Fatalities
LCW	Low Pressure Cooling Water
LDRD	Laboratory Directed Research and Development
LEDO	Laboratory Emergency Duty Officer
LEPC	Local Emergency Planning Committee
Leq	Equivalent-Continuous Sound Level
LINAC	Linear Accelerator
LLNL	Lawrence Livermore National Laboratory
LLW	Low-Level Waste
LOEC	Lowest observed effect concentration
LOS	Limit of sensitivity
LPF	Leak Path Factor
LPT	Lymphocyte proliferation test
L/RWD	Lost/Restricted Work Day
LSA	Low Specific Activity
LSO	Laser Safety Officer
LSO	Livermore Safety Officer
LS&T	Laser Science and Technology
LWC	Low work day cases
LWD	Lost work days
LWRP	Livermore Water Reclamation Plant
m	meter
MAPEP	Mixed Analyte Performance Evaluation Program
MAR	Materials at Risk
mCi	Millicurie
MCL	Maximum contaminant level
MDC	Minimum detectable concentration
MDD	Materials Distribution Division
MEI	Maximally exposed individual
mg	milligram
MLLW	Mixed low-level waste



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MJ	Megajoules
MM	Modified Mercalli
MOU	Memorandum of understanding
MPL	Maximum permitted level
MRP	Monitoring and Reporting Program
MSDS	Material safety data sheet
mrem	millirem
MSE	Molten-salt extraction
MSR	Materials and Storage Retrieval
mSv	Millisievert
MTBE	Methyl tertiary-butyl ether
MTC	Metropolitan Transit Commission
MVM	Million vehicle miles
MWH	Megawatt hours
MWMP	Medical Waste Management Plant
NAAQS	National Ambient Air Quality Standards
NAI	Non-Proliferation, Arms Control and International Security
NARAC	National Atmospheric Release Advisory Center
NCR	Nonconformance report
NCRP	National Council on Radiation Protection and Measurements
NEPA	<i>National Environmental Policy Act</i>
NESHAPs	National Emissions Standards for Hazardous Air Pollutants
NEUMA	Neutron Multiplying Assembly
NHPA	<i>National Historical Preservation Act</i>
NIF	National Ignition Facility
NNSA	National Nuclear Security Administration
NO <sub>2</sub>	Nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOD	Notice of deficiency
NOEC	No observed effect concentration
NOI	Notice of Intent
NO <sub>x</sub>	Nitrogen oxide

NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPOC	Non-precursor organic compounds
NRC	Nuclear Regulatory Commission
NRHP	National Register of Historic Places
N&S	Necessary and Sufficient
nSv	Nanosievert
NTS	Nevada Test Site
NWP	Nationwide permit
O <sub>2</sub>	Oxygen
O <sub>3</sub>	Ozone
OAASIS	Occupational Accident Injury/Illness Analysis Support and Information System
OAB	Optics Assembly Building
OBT	Organically bound tritium
OCRWM	Office of Civilian Radioactive Waste Management
OES	Office of Emergency Services
ORAD	Operations and Regulatory Affairs Division
OSHA	Occupational Safety and Health Administration
OSP	Operational space and parks
OU	Operable unit
P2	Pollution Prevention
PA	Programmatic agreement
PAAA	<i>Price-Anderson Amendments Act</i>
PAG	Protective Action Guide
PAT	Physics and Advanced Technologies
PG&E	Pacific Gas and Electric
PCB	Polychlorinated biphenyl
PCE	Perchloroethylene (or perchloroethene tetrachloroethene)
PDD	Presidential Decision Directive
PEIS	Programmatic Environmental Impact Statement
PG&E	Pacific Gas and Electric

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PHA	Public health assessment
pHMS	pH Monitoring Station
PL	Public Law
PM	Performance measure
PMCL	Primary maximum contaminant level
POC	Precursor Organic Compounds
POTW	Publicly owned treatment works
ppb	Parts per billion
ppm	Parts per million
PPE	Personal protective equipment
PPOA	Pollution prevention opportunity assessment
PPVS	Plant Performance Verification Series
PQL	Practical quantitation limit
PSA	Project-Specific Analysis
PSI	Pounds per square inch
PTU	Portable treatment unit
Pu	Plutonium
PVC	Polyvinyl chlorides
QA	Quality assurance
QC	Quality control
R&D	Research and Development
RAIP	Remedial Action Implementation Plan
RCRA	<i>Resource Conservation and Recovery Act of 1976</i>
RDWP	Remedial Design Work Plan
RD	Remedial Design
RDX	Hexahydro-1,3,5-trinitro-1,3,5-triazine
rem	Radiation equivalent man
RG	Risk Group
RHWM	Radioactive and Hazardous Waste Management Complex
RI/FS	Remedial investigation/feasibility study
RL	Reporting limit
RMA	Radioactive Materials Area

RMMA	Radioactive Materials Management Area
ROD	Record of Decision
ROI	Region of Influence
ROW	Right of Way
RTW	Return to Work Program
RWQCB	Regional Water Quality Control Board
SAA	Streambed alteration agreement
SAAQS	State Ambient Air Quality Standards
SAER	Site Annual Environmental Report
SBSSMP	Stockpile Stewardship and Management Program
SHPO	State Historic Preservation Officer
SNL/CA	Sandia National Laboratories/California
SAR	Safety analysis report
SARA	<i>Superfund Amendment and Reauthorization Act of 1986</i>
SAT	Space Action Team
SCIF	Sensitive Compartmented Information Facility
SDF	Sewer Diversion Facility
SE	Standard error
SEP	Safety and Environmental Protection
SERC	State Emergency Response Commission
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SHARP	Super High Altitude Research Project
SHPO	State Historic Preservation Officer
SI	Système International d'Unités
SIS	Special Isotope Separator
SJEHD	San Joaquin Environmental Health Department
SJVUAPCD	San Joaquin Valley Unified Air Pollution Control District
SMC	Senior Management Council
SMCL	Secondary maximum contaminant level
SME	Subject matter expert or Safety Management Evaluation
SMS	Sewer Monitoring Station
SNL/CA	Sandia National Laboratories, California

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SNM	Special nuclear material
SO <sub>2</sub>	Sulfur dioxide
SOP	Standard operating procedures
SOV	Summary of violations
SPCC	Spill Prevention Control and Countermeasure
SRS	Savannah River Site
SSM PEIS	Stockpile Stewardship and Management PEIS
SST/SGT	Safe Sescure Trailers/Safeguards Transport
STP	Site treatment plant
STU	Solar treatment unit
Sv	Sievert
SVE	Soil vapor extraction
SWEA	Site-Wide Environmental Assessment
SWEIS	Site-Wide Environmental Impact Statement
SW-MEI	Site-wide maximally exposed individual member (of the public)
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TBACT	Toxic best available control technology
TBD	To Be Determined
TBOS	Tetrabutyl orthosilicate
TCA	trichloroethane
TCE	Trichloroethene (or trichloroethylene)
TCLP	Toxicity characteristic leaching procedure
TCP	Traditional cultural properties
TDS	Total dissolved solids
TEEL	Temporary Emergency Exposure Limit
TF	Treatment facilitie
TKEBS	Tetrakis (2-ethylbutyl) silane
TLD	Thermoluminescent dosimeter
TNT	Trinitrotoluene
TOC	Total organic carbon
TOX	Total organic halides

TPY	Tons per year
TRAGIS	Transportation Routing Analysis Geographic Information System
TRC	Total reportable cases
TRU	Transuranic waste
TRUPACT II	Transuranic Package Transporter II
TSCA	<i>Toxic Substances Control Act</i>
TSF	Terascale Simulation Facility
TSMP	Transportation Systems Management Program
TSS	Total suspended solids
TTO	Total toxic organics
TWMS	Total Waste Management System
U	Uranium
UC	University of California
USACE	United States Army Corps of Engineers
USC	United States Code
USFWS	United States Fish and Wildlife Service
UV/H <sub>2</sub> O <sub>2</sub>	Ultraviolet/hydrogen peroxide
VOC	Volatile organic compound
VTF	Vapor treatment facility
WAA	Waste accumulation area
WDR	Waste Discharge Requirements
WFO	Work For Others
WIPP	Waste Isolation Pilot Plant
WMD	Weapons of mass destruction
WSS	Work Smart Standards
Zone 7	Alameda County Flood Control and Conservation District, Zone 7

**UNIT OF MEASURE AND ABBREVIATIONS**

ac	acre
BGY	billion gallons per year
cm	centimeters
ft <sup>3</sup>	cubic feet
ft <sup>3</sup> /s	cubic feet per second
m <sup>3</sup>	cubic meters
yd <sup>3</sup>	cubic yards
Ci	Curie
dB	decibel
°C	degrees Celsius
°F	degrees Fahrenheit
ft	feet
gal	gallon
gpd	gallons per day
g	gram
g/sec	grams per second
g	gravity
ha	hectare
Hz	Hertz
hr	hour
K	kelvin
kg	kilogram
kJ	kilojoule
km	kilometer
km/hr	kilometer per hour
kV	kilovolt
kVA	kilovoltampere
kW	kilowatt
kWh	kilowatt hour
L	liter

MJ	megajoule
MVA	megavolt-ampere
MW	megawatt
MWh	megawatt hour
MWe	megawatt-electric
MWt	megawatt-thermal
m	meter
m/sec	meters per second
$\mu\text{Ci}$	microcurie
$\mu\text{Ci/g}$	microcuries per gram
$\mu\text{g}$	microgram
$\mu\text{g/m}^3$	micrograms per cubic meter
$\mu\text{g/kg}$	micrograms per kilogram
$\mu\text{g/L}$	micrograms per liter
$\mu\text{m}$	micron or micrometer
$\mu\text{ohms/cm}$	microohms per centimeter
mPa	micropascal
mi	mile
mph	miles per hour
mCi	millicurie
mCi/g	millicurie per gram
mCi/ml	millicurie per millimeter
mg	milligram
mg/L	milligram per liter
ml	milliliter
mmHg	millimeters of mercury
M	million
MeV	million electron volts
MGD	million gallons per day
MGY	million gallons per year
mrem	millirem
mrem/yr	millirem per year



nCi	nanocurie
nCi/g	nanocuries per gram
ppb	part per billion
ppbv	part per billion by volume
ppm	part per million
PM <sub>10</sub>	particulate matter of aerodynamic diameter less than 10 micrometers
PM <sub>25</sub>	particulate matter of aerodynamic diameter less than 25 micrometers
Pa	pascal
pCi	picocurie
pCi/g	picocuries per gram
pCi/L	picocuries per liter
lb	pound
lbm	pounds mass
psi	pounds per square inch
lb/yr	pounds per year
qt	quart
rem <sup>a</sup>	Roentgen equivalent, man
sec	second
ft <sup>2</sup>	square feet
km <sup>2</sup>	square kilometers
m <sup>2</sup>	square meters

**CONVERSION CHART**

TO CONVERT FROM U.S. CUSTOMARY INTO METRIC			TO CONVERT FROM METRIC INTO U.S. CUSTOMARY		
If you know	Multiply by	To get	If you know	Multiply by	To get
<b>Length</b>					
inches	2.540	centimeters	centimeters	0.3937	inches
feet	30.48	centimeters	centimeters	0.03281	feet
feet	0.3048	meters	meters	3.281	feet
yards	0.9144	meters	meters	1.094	yards
miles	1.609	kilometers	kilometers	0.6214	miles
<b>Area</b>					
square inches	6.452	square centimeters	square centimeters	0.1550	square inches
square feet	0.09290	square meters	square meters	10.76	square feet
square yards	0.8361	square meters	square meters	1.196	square yards
acres	0.4047	hectares	hectares	2.471	acres
square miles	2.590	square kilometers	square kilometers	0.3861	square miles
<b>Volume</b>					
fluid ounces	29.57	milliliters	milliliters	0.03381	fluid ounces
gallons	3.785	liters	liters	0.2642	gallons
cubic feet	0.02832	cubic meters	cubic meters	35.31	cubic feet
cubic yards	0.7646	cubic meters	cubic meters	1.308	cubic yards
<b>Weight</b>					
ounces	28.35	grams	grams	0.03527	ounces
pounds	0.4536	kilograms	kilograms	2.205	pounds
short tons	0.9072	metric tons	metric tons	1.102	short tons
<b>Temperature</b>					
Fahrenheit (°F)	subtract 32, then multiply by 5/9	Celsius (°C)	Celsius (°C)	multiply by 9/5, then add 32	Fahrenheit (°F)
Kelvin (K)	subtract 273.15	Celsius (°C)	Celsius (°C)	add 273.15	Kelvin (K)

*Note: 1 sievert = 100 rems*